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Conducting a Shared Mental Model of Student Evaluation: Implications for Nurse Educators

Dorie Fritz
doriejfritz@gmail.com

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Dorie Fritz

St. Catherine University

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Abstract

Subjective evaluation of student performance, by its definition, is open to bias, the possibility of being inequitable, and of being unfair. One faculty member may consider a student performance passing, while the next faculty member may not. Grading criteria may not have the same meaning to all evaluators, which compounds the issue. In search of narrowing the variables, faculty may develop a shared mental model, where faculty reach agreement on the terms and criteria used for subjective evaluation. The use of a shared mental model should decrease subjectivity, and result in student evaluations that are more fair and equitable. This is based on faculty use of more specific, objective criteria for subjective evaluations. The benefits to faculty are that a shared mental model of conducting evaluations promotes best practices in evaluation, and may provide defensible evaluations in high-stakes situations if students grieve the evaluation or decide to pursue legal action.

Keywords: shared mental model, nursing education, evaluation, subjective

Conducting a Shared Mental Model of Student Evaluation: Implications for Nurse Educators

Nursing faculty provide subjective evaluations of student performance by evaluating papers, care plans, clinical performance and simulation performance. Nursing faculty might use professional nursing standards and competencies, nurse educator standards, nursing and academic best practices, rubrics, and their experience to guide decisions. There is variability in the definition of terminology, criteria, and levels of training in using evaluation tools (Kardong-Edgren, Oermann, Rizzolo, & Odom-Maryon, 2017, p. 64; Oermann, Yarbrough, Saewert, Ard, & Charasika, 2009, p. 353). One way to use valid, evidenced-based evaluation methods is for faculty to develop a shared mental model (SMM) where faculty apply a more consistent and standard approach for student assessment (Boulet, Jeffries, Hatala, Korndorffer, Feinstein, & Roche, 2011, p. S49; Kardong-Edgren, et al., 2017, p. 66). The use of a SMM should lead to a more fair and equitable evaluation of student performance. For the purposes of this paper, the terms, nursing faculty and nurse educators, will be used to refer to those nurse educators who are responsible for teaching nursing students in academic programs of nursing.

Background

The determination of whether a nursing student is competent to practice nursing is made through a series of evaluations by nursing faculty. Classroom and clinical testing is designed to evaluate understanding, knowledge, skills, and clinical thinking or judgment. One question related to subjective testing is whether faculty are using similar determinations of student abilities or if students are being evaluated on definitions, criteria, and skills that have varying meaning between faculty members.

The mission of the National League for Nursing (NLN, 2017) is “promotes excellence in nursing education to build a strong and diverse nursing workforce to advance the health of our nation and the global community” (para. 1). One component of providing excellent education is the ability of nursing faculty to evaluate students in a fair and equitable manner. The NLN (2012a) calls for fair and equitable testing in relation to high-stakes evaluation (i.e., evaluation which blocks graduation or eligibility for the licensing exam, p. 1). However, all evaluation needs to be fair and equitable for students. To provide the most relevant, responsible evaluation, faculty must agree on more than just what evaluation tool or rubric to use. Faculty must define such things as terminology, cut-off limits, and be of a similar mind when subjective evaluations are conducted by more than one faculty member (Kardong-Edgren et al., 2017; Manz, Hercinger, Todd, Hawkins, & Parsons, 2013; Rizzolo, Kardong-Edgren, Oermann, & Jeffries, 2015).

Subjective Evaluation

Subjective student evaluations should be fair and equitable, with as little variability as possible. Variability between evaluators leads to decreased reliability. Reliability refers, in part, to the idea that similar results would be obtained with repeated testing (Mazurek Melnyk & Fineout-Overholt, 2015, p. 13). While a rubric is one method to provide a framework for evaluation, words and phrases such as “communicates effectively” in the clinical setting, the definition of “competent" for either the clinical or a simulation setting, or “well written” for a paper can be interpreted by faculty in various ways. These terms need to have similar meaning to all evaluators, or students and faculty will be left wondering if another faculty member provided the evaluation, would the results have been different? A rubric leaves room for educator bias (Docherty & Dieckmann, 2015).

Evaluating subjective student performance is nuanced, and open to the interpretation and experiences of the individual evaluator (Boulet et al., 2011; Kardong-Edgren et al., 2017). It is also open to biased, unreliable and unfair applications (Kardong-Edgren et al., 2017). Nurse educators must ensure that student evaluations are as equitable as possible to prepare nurses who are competent and capable, with logical assessment abilities and higher-order thinking skills. One way to accomplish this is to assure faculty are of the same mind when conducting subjective student evaluations. This can be facilitated through development of a shared mental model.

Mental Model

The concept of a mental model is not new. Variously defined by skilled trade industries as related to manual control or psychomotor performance, the term mental model reached the realm of hypothetical, supervisory, and compensatory detection, diagnosis, and control over systems and failures (Rouse & Morris, 1986). The term mental model is frequently used in the military and by air traffic controllers as a way to make judgments based on knowledge or a mental map of the system. This process occurs through an individual's knowledge and experience of the situations and the systems. Functioning at a high level, an individual with this type of mental model is often considered an expert who may not be able to verbalize how they made their decisions (p. 353). The term mental model can then be defined as "organized knowledge structures that allow individuals to interact with their environment" (Mathieu, Goodwin, Heffner, Salas, & Cannon-Bowers, 2000, p. 274).

Shared Mental Model

A shared mental model (SMM) can be thought of as a group of experts who share a similar mental model. The group has expertise in the content area, knowledge of the situation and the system, and has made judgments based on their experience and knowledge. According to

McComb and Simpson (2014), a SMM is "individually held knowledge structures that help team members function collaboratively in their environments and are comprised of the attributes of content, similarity, accuracy and dynamics" (p. 1485). For the purposes of this paper a SMM will be considered a shared definition and agreement among group members of a framework or knowledge structure. It is important to note that a SMM refers to a similar, not identical, definition and framework. It does not mean group members have an exact agreement. Room exists for flexibility, expert opinion, and compromise.

Shared mental models are often used to facilitate teamwork. According to Green (2011), a SMM is "a framework that simplifies a potentially complicated strategy, allowing everyone in the organization to internalize the strategy and be guided by it" (para. 3). A SMM can be used by an entire health system (Evans, 2014), leading to improved processes, communication, and coordination. Again, this does not mean that the SMM strictly dictates how the team or health system functions, or how individual members within the team function, only that the SMM facilitates agreement and the use of common definitions.

A SMM is different from working on a team, however, and is different from teamwork. Team members do not need to be working in the same location or at the same time to use a SMM (McComb & Simpson, 2013, p. 1480). Kogler Hill (2016) defines a team as "a type of organizational group that is composed of members who are interdependent, who share common goals, and who must coordinate their activities to accomplish these goals" (p. 363). Teamwork can be defined as "cooperative or coordinated effort on the part of a group of persons acting together as a team or in the interests of a common cause" (Dictionary.com). Teamwork involves working alongside or with others. A team can work toward a common goal (patient discharge from the hospital) but may not have a SMM. For example, consider a patient who had a joint

replacement. The nurse wants to administer pain medication before the patient has therapy, but the physical therapist wants to take the patient for the therapy session that is scheduled to begin. The nurse and physical therapist are working on a team and share a common goal of faster patient discharge, but they lack a SMM. The nurse wants decreased pain as a primary goal, while the physical therapist wants improved range of motion as the primary goal. If they had a SMM, they would see that both goals work in concert; decreased pain allows the patient to work towards improved range of motion, greater comfort during the therapy session, and potentially faster discharge. A SMM may improve the experience for the nurse, the physical therapist, and the patient.

One concern with teamwork and SMMs in health care is that the use of SMMs could lead to "groupthink" where fewer ideas are generated, less creativity results, and there is increased pressure to conform (Kaba, Wishart, Fraser, Coderre, & McLaughlin, 2016). According to Kaba et al. (2016) any intervention should be evaluated via data collection and outcomes. Unfortunately, these authors do not consider the intangible benefits of increased knowledge among team members about what they are doing, increased trust in team members, and the respect that develops as a result of these interactions.

Although a SMM facilitates teamwork and communication, a SMM can exist without teamwork. For example, consider when healthcare providers use SBAR communication. (SBAR is an acronym for Situation, Background, Assessment, Recommendation.) Using SBAR, one healthcare team member can clearly and quickly communicate to another healthcare team member what is happening to a patient. Both healthcare team members have a SMM of what SBAR is and why it is used. This facilitates the speed, clarity, purpose, and direction of the

communication. This SMM of using SBAR communication has been recommended by The Joint Commission (Labson, 2013).

Literature About Shared Mental Models

McComb and Simpson (2014) attempted to refine the definition of a SMM by searching CINAHL, PubMed and MEDLINE (EBSCO Interface) databases (p. 1479). McComb and Simpson's literature review includes the TeamSTEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety, Agency for Healthcare Research and Quality, 2017) approach to teamwork. Combining the TeamSTEPPS approach with other approaches that focus on building a SMM, McComb and Simpson developed a frequently used definition of a SMM, which is used for this paper.

According to Docherty and Dieckmann (2015), "neither subjectivity nor failing to fail are phenomena unique to clinical instruction. Graders of written material report the same internal and external struggles as clinical instructors grading clinical practice" (p. 230). Instructors may pass students because the instructors do not feel they would have support of the school administration if they failed a student, the student might turn to litigation, the student still needs to pass the NCLEX, or the potential damage to professional standing.

In a follow-up from an NLN study, Kardong-Edgren et al. (2017) examined the challenges of inter- and intrarater reliability related to developing a SMM. They stress the importance of faculty having "similar values and professional judgment who are willing and capable of basing their judgments on the set criteria" (p.66). Kardong-Edgren et al. also assert, "Our findings demonstrate how important this preparatory work is when embarking on legally defensible high-stakes testing" (p. 67).

Learning Theories for Building Shared Mental Models

The constructivist learning theory by Bruner (1973) is based on the premise that new learning is attached or connected to what the learner already knows. The learner constructs and makes connects that make sense to that learner. Faculty who use a constructivist approach can build a SMM by connecting what faculty members already knows about the subjective evaluation, past experiences with that evaluation, and the group's goal of the SMM. These faculty members should be able to connect the social situation of the group to the goal of the SMM. Clinical learning experiences and simulation lend themselves well to the constructivist learning theory, which should help these faculty members work towards a SMM.

The adult education learning theory by Knowles (1970) is founded in the premise that adults are shaped by their past learning experiences and connected to a social context. In developing definitions for subjective criteria and setting a date for completion of work (e.g., practice evaluating papers, practice evaluating videos, meetings to discuss and review results from data collection of SMM practice), faculty who use the adult learning theory are actively involved in the initial process and know what is expected of them. They can obtain support from each other during the meetings, share their experience of the SMM process, and are invested in the results.

The novice to expert theory by Benner (1982) is particularly well suited for the SMM. In this theory, the novice acquires skill through experience and practice. Students also need to learn the skills of self-reflection. Development of a SMM occurs in the same manner. It takes experience, practice, and self-reflection. Once faculty have the experience of trying to achieve a SMM, individual practice, and then evaluating the group results, the faculty can take time for self-reflection to see how close they are to that SMM. Research studies conducted by Rizzolo et

al. (2015) and Kardong-Edgren et al. (2017) report finding that viewing and rating approximately 11 videos are typical for the group to develop a SMM. This allows time for remediation, additional practice, and then returning to the group to re-evaluate the group's performance.

Nursing Theories and Application to Shared Mental Models

Two nursing theories in particular are applicable to the SMM. In Boykin, Schoenhofer, and Linde's (2010) theory of Nursing as Caring, "nursing uniquely focuses on caring as its central value, its primary interest, and the direction intention of its practice" (p. 372). Caring is difficult to describe, and even more difficult to measure. Boykin et al. (2010) describe caring as "an altruistic, active expression of love and is the intentional an embodied recognition of value and connectedness" (p. 372). If this is a primary focus of nursing, the question becomes how is that measured or evaluated in an academic setting? This is where a SMM for faculty is helpful. Faculty can have a list of descriptors of caring behaviors, words, tone of voice, and actions that demonstrate caring. When learning about nursing theories, students can identify those same behaviors, words, tone of voice, and actions, and learn to incorporate them into the student's practice, bringing the nursing theory to life. Students might demonstrate nursing as caring in a paper, in simulation, or in a clinical environment. As long as faculty have the SMM for this theory, they are able to evaluate it in these situations.

Another nursing theory applicable to the SMM is the Neuman Systems Model (Aylward, 2010). According to Aylward (2010), benefits of using this model include improved cultural considerations in the curriculum, a greater focus on nursing rather than medicine, the concept of clients as holistic beings, flexible program content, a framework to study individual illness and reaction to stressors, an expanded view of "family," and prevention as an intervention. This model is useful developing a SMM in nursing evaluation because of the holistic and

comprehensive nature of the model. Curriculum built on theories such as the Neuman Systems Model requires terminology, concepts, and definitions to have clear agreement among evaluators, where a SMM is especially useful. Students can demonstrate this model during any type of subjective evaluation where the student is required to demonstrate holistic approaches, prevention, cultural considerations, or the expanded view of family. Without a SMM, faculty may miss the importance of these concepts in the evaluation of student performance.

Steps for Achieving a Shared Mental Model

To evaluate nursing students using a SMM for subjective evaluation, faculty must go through several steps. Manz et al. (2013) describe the difficulties in achieving consistency in evaluation, including demonstration of competency and the definitions of criteria used to demonstrate competency. While Manz et al. (2013) focus on simulations, the lessons learned can be applied to other forms of subjective evaluation. The following sections outline possible steps to achieve a SMM. Each step is described with examples of a care plan and a simulation.

Step One: Define Objectives

The first step of conducting a SMM is to clearly define what is to be measured and to decide what is the performance objective students are expected to achieve. This initial step helps nursing faculty clarify the purpose of the student performance and the purpose of the nursing faculty evaluation. According to McDonald (2014), “The best approach for defining mastery is to first establish a consensus among the nursing faculty for the minimum level of mastery for safe nursing practice and then develop the learning outcomes that define mastery” (p. 42).

Example of a care plan. For students to write a nursing care plan, faculty must decide what constitutes the components of a complete care plan and what program level is appropriate for students to complete these requirements. The content of the care plan is most likely

considered an important component of the care plan. Faculty must determine, what parts of the content are the most important? Would the assessment information be given greater weight than the intervention or evaluation portion of the care plan? Do students need to use American Psychology Association (APA) format for all components of the care plan, or only certain components, such as references? Is the care plan handwritten, available in electronic format, or uploaded to the school's course management website? Faculty need to decide what components are critical to be measured in the evaluation.

Example of a simulation. For students to pass a simulation, faculty must decide which components of the simulation are critical for the student to complete successfully. Are those components reacting to abnormal vital signs, handwashing, patient identifiers, communication skills, critical thinking, clinical reasoning, or some combination of these? Is there a component where a student would automatically fail if the student missed or mismanaged that component? What if the student partially completed that component? This type of clarity is the foundation for building a SMM.

Step Two: Agree Upon Definitions

In step two, nursing faculty agree upon definitions of the measurements or components of the student evaluation. Subjective evaluations carry subjective definitions. Faculty discussions need to be as explicit as possible in defining what might otherwise be open to interpretation to help achieve a SMM. Each school or program may differ in their definition of terms, phrases, and expectations. Being explicit at this phase will give faculty the references needed to base decisions on when reviewing and practicing their development of a SMM.

Example of a care plan. Does a nursing diagnosis include the three traditional parts: the patient's need or problem, what the need or problem is related to, and the evidence of the need or

problem? Or are faculty willing to accept an abbreviated statement that identifies only the patient's need or problem?

Example of a simulation. One of the more difficult definitions in evaluation of simulation experiences is defining what "competence" means (Kardong-Edgren et al., 2017; Rizzolo et al., 2015). Does competence mean a student performed everything perfectly (or nearly so)? Does competence mean the student self-corrected at some point? What about the student who may not have performed proper handwashing or used the correct number of patient identifiers, but was exceptional at demonstrating critical thinking or clinical reasoning skills? Is that student considered competent? Without a definition of these terms and answering questions like these, faculty will not reach a SMM.

Step Three: Practice Rating

In step three, faculty practice rating students using the defined objectives from step one and the definitions in step two. Just as a musician practices to learn a piece of music to learn and improve, this is solitary experience. Faculty use this opportunity to try step two, apply the individual faculty members' own expertise to the evaluation. By using what was discussed in the group, the individual faculty members attempt to reach a SMM. Thoughtful consideration of the discussions in step one and two is required, including the agreed upon definitions of terms, phrases, and expectations. Individual practice should be spaced out over a specific time period agreed upon by the team.

Example of a care plan. Faculty members evaluate multiple care plans, using the agreed upon criteria of step one and definitions in step two. To facilitate developing a SMM, it is helpful to have de-identified examples that have been evaluated by expert faculty (though preferably not those participating in the training) as poor, average, and exceptional examples. Ideally, faculty

would take time between care plans to consider the definitions and not evaluate all care plans in one day.

Example of a simulation. Faculty will view and evaluate previously recorded examples of students performing in simulations. This ensures all faculty are viewing the same scenario with no variation in student performance or standardized patients. The videos should be of similar length, patient complexity, and audio-video quality. To facilitate developing a SMM, it is helpful to have examples previously evaluated by expert faculty (though preferably not those participating in the training) as poor, average, and exceptional examples. Faculty should take time between videos to consider the definitions and not view all videos in a few days. Faculty also need to discuss and agree upon the rationale for the time frame for viewing videos.

Step Four: Compare Results

During this step, results from individual faculty members are compared to determine how close the group is to developing a SMM. This step is also an opportunity to clarify misunderstandings, reiterate the previously agreed upon definitions, and engage in remediation if needed. Results are statistically analyzed to identify the mean, median, and mode of ratings; to identify outliers (those who score well above or well below the rest of the group); and to identify what areas are farthest from development of a SMM (greatest variance in results).

Example from a care plan and a simulation. The example for this step is identical for either a care plan or a simulation. Faculty submit their results to the faculty member conducting the training in advance of a meeting date to have the results analyzed and available for discussion at the meeting. All group members can see how close the group is to a SMM and can identify which components or definitions are causing the group difficulty in reaching a SMM. Remediation is given to address any outliers.

Step Five: Reaching a Shared Mental Model

Faculty continue with individual practice until a SMM is reached. A set number of additional practice student performance evaluations are provided. The fourth step is repeated, with the individual results analyzed to determine how close the faculty team is to reaching a SMM. This step cannot be underestimated (Kardong-Edgren et al., 2017, p. 66). Without this fifth step and without achieving a SMM, faculty have not provided for fair and equitable evaluation of student performance, which is the heart of developing a SMM. Faculty evaluation of student performance has an impact on whether the student progresses through the program (Christensen, 2016, p. 36). If the evaluation from one faculty member to the next is not comparable, then reliability is lacking and students may not be receiving equitable evaluations (Bourke & Ihrke, 2016, pp. 393-394).

Additional reasons for developing a SMM are for faculty to protect themselves from student grievances and from possible legal action if a student disagrees with his or her evaluation. According to Kardong-Edgren et al. (2017), "There are no short-cuts to legally defensible . . ." (p. 67). According to Christensen (2016), "litigation involving nursing programs has dramatically increased" (p. 37). Christensen also notes that students have a right to expect fair treatment that includes fair evaluations (pp. 38-39).

Example from a care plan and a simulation. The example for this step is identical for either a care plan or a simulation. Faculty evaluate additional care plans (or simulations), turn in results for statistical analysis, reconvene and discuss results. At this point the faculty should have come much closer to, or reached, a SMM of student performance. By having a SMM, faculty have a shared understanding of the subjective criteria used for evaluation, the definition of terms, and are more closely aligned on the definitions for varying levels of student performance. The

students no longer have faculty who evaluate students in a manner that is “easy” or “hard”, which should lead to more fair and equitable evaluations for students.

Significance and Implications for Nurse Educator Practice

It is essential that nurse educators ensure students are prepared for professional practice. Part of this responsibility is the evaluation of student performance. Evaluating objective performance (e.g., passing a multiple-choice test, performing the correct steps in a skills lab) is less biased and has higher interrater reliability than evaluating subjective measure. For example, faculty may choose test items from a text bank, develop their test items, and use test items from previous exams. After testing, faculty can retrieve data regarding item difficulty, discrimination, number of students who answered correctly, and high achieving students who chose distractors. Test items can be changed, adjusted, or removed. If 10 faculty members review the test results from a group of students, faculty would arrive at the same conclusions.

Subjective Evaluation of Student Performance

Determining how student performance will be evaluated in subjective situations (e.g., papers, clinical settings, simulations) should be as fair and equitable as possible. The very nature of being subjective causes difficulty at the outset. Something seemingly obvious may not be when considered in a broader scope. McDonald (2014) asks,

> For example, would a single breach of sterile technique result in failure of a learning outcome? At first glance it would. However, when placed within the context of the entire course objective, what exactly constituted the student’s failure? Was the failure in meeting this learning outcome due to blatant carelessness and neglect, overwhelming anxiety, or lack of knowledge? Does failure to meet the standards of a learning outcome lend itself to remediation or

> course failure? Additionally, how many times can a student fail to meet the requirements of a learning outcome? (p. 314)

This highlights the difficulty of subjective evaluation. Does one faculty fail the student and another faculty give the student a chance to explain what they did wrong and the opportunity to make a correction? What does the evaluation tool look like? Does the faculty agree on the terms, conditions, and the situation? Additionally, McDonald (2014) states, "The evaluation tool must contain language that is clear, concise, and unambiguous" (p. 319). This holds true for objective testing. Nurse educators also want a subjective evaluation tool to be as clear, concise, and unambiguous as it can be.

Evaluation of Simulation Performance

The *Core Competencies of Nurse Educators* (NLN, 2012b) describe standards of practice for nurse educators. Competency 3 calls for the nurse educator to use evidence-based assessment and evaluation strategies and demonstrate skill in using the tools to assess clinical practice (NLN, 2012, p. 17). Nurse educators who develop a SMM are using evidence-based assessment and evaluation strategies to provide a fair and equitable evaluation of student performance.

The International Nursing Association for Clinical Simulation and Learning (INACSL, 2016) provides nurse educators with Standards of Best Practice: Simulation Participant Evaluation (2016). Criterion 3 states "Simulation-based experiences may be selected for summative evaluation." Elements of this criterion include selecting a valid and reliable scoring instrument, providing rater training for faculty conduction the observation-based evaluation, and establishing interrater reliability (p. S27). Criterion 4 states "Simulation-based experiences may be selected for high-stakes evaluation" (p. S27). Required elements include "[conducted by] trained, nonbiased objective raters or evaluators," "using a comprehensive tool (i.e., checklist or

rubric that clearly outlines desirable and undesirable behaviors)," and using "more than one evaluator for each participant" (p. S27). These INACSL standards are also consistent with developing a SMM and using evidence-based assessment and evaluation strategies to provide a fair and equitable evaluation of student performance.

Research about tools used to evaluate clinical performance in the literature presents some tools developed by faculty. Two clinical evaluation tools, the C-CEI (Creighton University, 2017; please see Appendix A) and the Lasater Clinical Judgment Rubric (Adamson, Gubrud, Sideras, & Lasater, 2012; Dillard, Sideras, Ryan, Hodson, Lasater, & Siktberg, 2009; Lasater, 2011; please see Appendix B), are valid and evidenced-based methods of evaluation. Both the C-CEI and Lasater Clinical Judgment Rubric have higher rates of reliability when faculty have been trained how to use the tool (Ashcraft, Opton, Bridges, Caballero, Veesart & Weaver, 2013; Creighton University, 2017).

Faculty use of evidence-based clinical evaluation tools in nursing education is essential. For example, how do nursing faculty evaluate professionalism in the clinical setting? One faculty may define professionalism as students who have all the required components of their uniform (e.g., name tag, stethoscope, polished white shoes). Another faculty member might define professionalism based on how well the student communicates with the patient or staff members. A third faculty member might judge professionalism on the student demonstration of caring behaviors. Without a SMM of how to evaluate students and their professional behaviors, the evaluation is not valid, fair or reliable. In simulation, the addition of interprofessional education and need for greater reliability and validity of assessment tools will become increasingly important (Bensfield, Olech, & Horsley, 2012).

Faculty training and the development of a SMM impacts the effectiveness of an evaluation (Cockerham, 2015; Oermann et al., 2009). In using the C-CEI tool, for example, Cockerham (2015) reported, “It became apparent in the workshop that there was a lack of consistency in how students were measured. Faculty did not have the same expectations when doing the assessment” (p. 69). As the workshop continued the faculty learned to identify key elements when assessing student performance. The faculty realized “that a consistent and standard approach for student assessment was not being used” (p. 70). During a two-day workshop, the nursing faculty came closer to developing a SMM of the C-CEI evaluation tool.

Why a Shared Mental Model Matters

Entrance to nursing schools remains competitive. Findings published in the executive summary of the NLN Biennial Survey of Schools of Nursing (NLN, 2015) shows 78% of associate degree programs turned away qualified applicants and 64% of bachelor degree programs turned away qualified applicants. Of those schools, 37% of the associate degree programs and 31% of the bachelor degree programs rejected qualified applicants primarily due to lack of clinical placements (49% in associate programs and 41% in bachelor programs) and lack of faculty (28% in associate programs and 31% in bachelor programs). In Minnesota, almost all associate degree nursing programs have waiting lists, and only two private college bachelor degree nursing programs are without wait lists (Johnson & Johnson, 2017). This increases pressure on students to succeed, and on faculty to ensure students are well prepared for practice.

With this increased pressure, faculty must be able to clearly identify what is and what is not an acceptable level of student performance. Students need to know that faculty members are applying the same evaluative criteria in a fair and equitable manner when evaluating performance, and that it is not luck or chance that determines whether the student will have a

faculty member who will evaluate the students in a fair and equitable manner. A SMM of subjective evaluation can help assure that students are being evaluated in a fair and equitable manner, where faculty have a comparable understanding of criteria and terminology to apply in subjective evaluations.

Students who disagree with a faculty member's evaluation, or a final grade, may dispute the evaluation or file a grievance with the school (Oermann et al., 2009, p. 356). Students are aware of the avenues available to them to dispute evaluations or pursue a grievance. Though rare, some nursing students have turned to litigation (McCrea, 2015; Phillip, 2015). According to McDonald (2014), "In today's litigious society it is not outside the realm of possibility that teachers could be called on to defend their assessment decisions in a court of law" (p. 255). This could apply to any form of student performance. Without evaluator agreement of what constitutes various attributes of the performance and the consistent, reliable application of that agreement among evaluators, a student may have grounds for a lawsuit. Nurse educators should not wait for a lawsuit to occur to take steps to prevent one. A SMM is one way to increase consistency and reliability among evaluators, and may have the added benefit of strengthening the position of faculty if a student questions the decisions of the evaluator (Boulet et al., 2011), especially if a lawsuit is pursued. Kardong-Edgren, et al. (2017) state, "There are no short cuts to legally defensible and evidence-based high-stakes evaluation" (p. 67). Developing a SMM can provide support for faculty if a student grievance is filed and if legal defense is needed.

Conclusion

As nurse educators strive to provide students with a nursing education that follows national standards, best practice guidelines, and prepares nursing students to practice in their roles as professional nurses, nurse educators must make decisions about student performance. To

ensure fair and equitable testing, nursing faculty use statistical analysis to determine the reliability and validity of objective measures used to evaluate student performance. With subjective student performance, evaluations can be open to interpretation by nursing faculty based on their experiences, inconsistent definitions of terminology and criteria, and a lack of training with the evaluation tools. When nursing faculty work to develop a SMM for subjective evaluation, faculty have a clearer understanding of definitions and criteria and use the SMM to conduct student evaluations in a fair and equitable manner that allows for more consistent evaluations (Kardong-Edgren et al., 2017, p. 65).

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Appendix A

Creighton Competency Evaluation Instrument

Creighton Competency Evaluation Instrument (CCEI)

Student Name: _____
Staff Nurse Instructor Name: _____

0= Does not demonstrate competency
1= Demonstrates competency NA= Not applicable
Circle Appropriate Score for all Applicable Criteria - If not applicable, circle NA

Date: / / MM / DD / YYYY

ASSESSMENT				COMMENTS:
1. Obtains Pertinent Data	0	1	NA	
2. Performs Follow-Up Assessments as Needed	0	1	NA	
3. Assesses the Environment in an Orderly Manner	0	1	NA	
COMMUNICATION				
4. Communicates Effectively with Intra/Interprofessional Team (TeamSTEPPS, SBAR, Written Read Back Order)	0	1	NA	
5. Communicates Effectively with Patient and Significant Other (verbal, nonverbal, teaching)	0	1	NA	
6. Documents Clearly, Concisely, & Accurately	0	1	NA	
7. Responds to Abnormal Findings Appropriately	0	1	NA	
8. Promotes Professionalism	0	1	NA	
CLINICAL JUDGMENT				
9. Interprets Vital Signs (T, P, R, BP, Pain)	0	1	NA	
10. Interprets Lab Results	0	1	NA	
11. Interprets Subjective/Objective Data (recognizes relevant from irrelevant data)	0	1	NA	
12. Prioritizes Appropriately	0	1	NA	
13. Performs Evidence Based Interventions	0	1	NA	
14. Provides Evidence Based Rationale for Interventions	0	1	NA	
15. Evaluates Evidence Based Interventions and Outcomes	0	1	NA	
16. Reflects on Clinical Experience	0	1	NA	
17. Delegates Appropriately	0	1	NA	
PATIENT SAFETY				
18. Uses Patient Identifiers	0	1	NA	
19. Utilizes Standardized Practices and Precautions Including Hand Washing	0	1	NA	
20. Administers Medications Safely	0	1	NA	
21. Manages Technology and Equipment	0	1	NA	
22. Performs Procedures Correctly	0	1	NA	
23. Reflects on Potential Hazards and Errors	0	1	NA	

COMMENTS

Total: _____

Revised for DEU use 8/20/2013

Figure A. Creighton Competency Evaluation Instrument. Copyright Creighton University College of Nursing, 2013. Used with permission.

Appendix B

Lasater Clinical Judgment Rubric

Effective NOTICING involves:	Exemplary	Accomplished	Developing	Beginning
Focused Observation	Focuses observation appropriately; regularly observes and monitors a wide variety of objective and subjective data to uncover any useful information	Regularly observes/monitors a variety of data, including both subjective and objective; most useful information is noticed, may miss the most subtle signs	Attempts to monitor a variety of subjective and objective data, but is overwhelmed by the array of data; focuses on the most obvious data, missing some important information	Confused by the clinical situation and the amount/type of data; observation is not organized and important data is missed, and/or assessment errors are made
Recognizing Deviations from Expected Patterns	Recognizes subtle patterns and deviations from expected patterns in data and uses these to guide the assessment	Recognizes most obvious patterns and deviations in data and uses these to continually assess	Identifies obvious patterns and deviations, missing some important information; unsure how to continue the assessment	Focuses on one thing at a time and misses most patterns/deviations from expectations; misses opportunities to refine the assessment
Information Seeking	Assertively seeks information to plan intervention: carefully collects useful subjective data from observing the client and from interacting with the client and family	Actively seeks subjective information about the client's situation from the client and family to support planning interventions; occasionally does not pursue important leads	Makes limited efforts to seek additional information from the client/family; often seems not to know what information to seek and/or pursues unrelated information	Is ineffective in seeking information; relies mostly on objective data; has difficulty interacting with the client and family and fails to collect important subjective data

Effective INTERPRETING involves:	Exemplary	Accomplished	Developing	Beginning
Prioritizing Data	Focuses on the most relevant and important data useful for explaining the client's condition	Generally focuses on the most important data and seeks further relevant information, but also may try to attend to less pertinent data	Makes an effort to prioritize data and focus on the most important, but also attends to less relevant/useful data	Has difficulty focusing and appears not to know which data are most important to the diagnosis; attempts to attend to all available data
Making Sense of Data	Even when facing complex, conflicting or confusing data, is able to (1) note and make sense of patterns in the client's data, (2) compare these with known patterns (from the nursing knowledge base, research, personal experience, and intuition), and (3) develop plans for interventions that can be justified in terms of their likelihood of success	In most situations, interprets the client's data patterns and compares with known patterns to develop an intervention plan and accompanying rationale; the exceptions are rare or complicated cases where it is appropriate to seek the guidance of a specialist or more experienced nurse	In simple or common/familiar situations, is able to compare the client's data patterns with those known and to develop/explain intervention plans; has difficulty, however, with even moderately difficult data/situations that are within the expectations for students, inappropriately requires advice or assistance	Even in simple of familiar/common situations has difficulty interpreting or making sense of data; has trouble distinguishing among competing explanations and appropriate interventions, requiring assistance both in diagnosing the problem and in developing an intervention

Effective RESPONDING involves:	**Exemplary**	**Accomplished**	**Developing**	**Beginning**
Calm, Confident Manner	Assumes responsibility: delegates team assignments, assess the client and reassures them and their families	Generally displays leadership and confidence, and is able to control/calm most situations; may show stress in particularly difficult or complex situations	Is tentative in the leader's role; reassures clients/families in routine and relatively simple situations, but becomes stressed and disorganized easily	Except in simple and routine situations, is stressed and disorganized, lacks control, making clients and families anxious/less able to cooperate
Clear Communication	Communicates effectively; explains interventions; calms/reassures clients and families; directs and involves team members, explaining and giving directions; checks for understanding	Generally communicates well; explains carefully to clients, gives clear directions to team; could be more effective in establishing rapport	Shows some communication ability (e.g., giving directions); communication with clients/families/team members is only partly successful; displays caring but not competence	Has difficulty communicating; explanations are confusing, directions are unclear or contradictory, and clients/families are made confused/anxious, not reassured
Well-Planned Intervention/Flexibility	Interventions are tailored for the individual client; monitors client progress closely and is able to adjust treatment as indicated by the client response	Develops interventions based on relevant patient data; monitors progress regularly but does not expect to have to change treatments	Develops interventions based on the most obvious data; monitors progress, but is unable to make adjustments based on the patient response	Focuses on developing a single intervention addressing a likely solution, but it may be vague, confusing, and/or incomplete; some monitoring may occur
Being Skillful	Shows mastery of necessary nursing skills	Displays proficiency in the use of most nursing skills; could improve speed or accuracy	Is hesitant or ineffective in utilizing nursing skills	Is unable to select and/or perform the nursing skills

Effective REFLECTING involves:	Exemplary	Accomplished	Developing	Beginning
Evaluation/Self-Analysis	Independently evaluates/ analyzes personal clinical performance, noting decision points, elaborating alternatives and accurately evaluating choices against alternatives	Evaluates/analyzes personal clinical performance with minimal prompting, primarily major events/decisions; key decision points are identified and alternatives are considered	Even when prompted, briefly verbalizes the most obvious evaluations; has difficulty imagining alternative choices; is self-protective in evaluating personal choices	Even prompted evaluations are brief, cursory, and not used to improve performance; justifies personal decisions/choices without evaluating them
Commitment to Improvement	Demonstrates commitment to ongoing improvement: reflects on and critically evaluates nursing experiences; accurately identifies strengths/weaknesses and develops specific plans to eliminate weaknesses	Demonstrates a desire to improve nursing performance: reflects on and evaluates experiences; identifies strengths/weaknesses; could be more systematic in evaluating weaknesses	Demonstrates awareness of the need for ongoing improvement and makes some effort to learn from experience and improve performance but tends to state the obvious, and needs external evaluation	Appears uninterested in improving performance or unable to do so; rarely reflects; is uncritical of him/herself, or overly critical (given level of development); is unable to see flaws or need for improvement

Note. The Lasater Clinical Judgment Rubric. From "Clinical Judgment Development: Using Simulation to Create a Rubric," by K. Lasater, 2007, *Journal of Nursing Education, 45*, 496-503. Copyright 2007 by the Journal of Nursing Education. Used with permission.